

## PATENT SPECIFICATION



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## COMPLETE SPECIFICATION.

## Improvements in Trawling Nets.

I, HAROLD STANLEY ROWTON, of 7, Devanha Gardens, Aberdeen, a British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to Otter-trawl or the like nets.

In the known type of Otter trawl the upper portion of the net comprises the top wings, the square, batings, and the upper portion of the cod end, while the lower portion of the net consists of the lower wings, the belly and the under portion of the cod end. The wing portions of the net are formed by the longitudinal seam joining the upper and lower portions of the net together and extend forwardly from either side of the square.

When forming the seam above mentioned it is customary to draw up a number of meshes from each side to form a laceridge and in some cases a rope is used either alone or in conjunction with these meshes. The join or laceridge commences at the top point of connection of the net to the rear of the Otter board termed the head line tow shackle and the net is so arranged that the laceridge follows a line diagonally towards the rear of the net until it arrives at the forward end of the junction of the batings and the belly and is continued thence downwards to the end of the cod end.

The height of the known type of Otter board is normally between three and five feet and in consequence of the laceridge running towards the rear of the net to the point where it practically touches the ground the wings of the known type of net are in this manner formed.

In existing nets the weight of the rear portion of the net owing to lack of support by the laceridge is carried by certain meshes of the net thus causing considerable longitudinal strain which has

the effect of considerably reducing the filtration power of the net, renders the net more liable to damage and is the cause of the present destruction of immature fish which cannot escape through the strained meshes.

The object of the present invention is to provide a net the meshes of which at the outer boundaries are free from longitudinal strain in order to allow maximum filtration which means economy in towage and the prevention of the destruction of immature fish.

According to the present invention the upper and lower boundaries of the net are formed by ropes known as the upper and lower laceridge and between these laceridge ropes a piece of net which forms a vertical selvage is inserted thus joining the upper and lower portions of the net.

The top and forward portion of the vertical selvage may be connected with the head line to the tow shackle on the Otter board and the bottom forward portion to the foot rope tow shackle of the Otter board. At the same time it is not desired to limit the connections of the extremities of the vertical selvage directly to the otter board as they might equally well be connected to a staff or to extension legs placed between the ends of the net and the Otter boards. The vertical selvage extends rearwardly from these points towards the cod end so that the vertical selvage comprises a vertical wall suspended between the top and bottom laceridge ropes forming the outer boundaries of the upper and lower portions of the net.

Preferably these ropes are formed to a curve of free suspension and in consequence the vertical selvage will conform to a curve of free suspension so that the meshes of the laceridge are free from longitudinal strain which is carried by the laceridge ropes.

Further the height of the net between

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the two laceridge ropes is arranged so that the net itself lies in a curve of free suspension between the ropes.

The invention is more particularly described with reference to the accompanying drawings, in which:—

Fig. 1 is a view in perspective of the improved net.

Fig. 2 is a section on the line A—A of Fig. 1.

The net comprises a top portion 1 the outer boundary of which preferably conforms to a curve of free suspension and a lower portion 2 the outer boundary of this portion also conforming to a curve of free suspension. Along the outer boundaries of the top and bottom portions 1 and 2 are arranged laceridge ropes 3 and 4 and between these ropes there is inserted a selvedge net 5.

The forward end of the rope 3 is connected to the head line 6 and the forward end of the rope 4 is connected to the foot rope 7 and the height of the selvedge portion 5 is such that when under towage the meshes lie in a curve of free suspension relatively to the ropes 3 and 4 as shown more particularly in Fig. 2. In this manner the meshes of the net remain open since the strain of the cod end of the net is carried not by the meshes of the net itself, but by the laceridge ropes 3 and 4.

The vertical selvedge 5 continues as a tapering gusset 8 into the cod end.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is

to be performed, I declare that what I claim is:—

1. An Otter trawl net in which the upper and lower boundaries of the net are formed by ropes known as the upper and lower laceridge and between these ropes a piece of net forming a vertical selvedge is inserted, the selvedge thus joining the upper and lower portions of the net substantially as described.

2. An Otter trawl as claimed in Claim 1, in which the height of the net connected to the two laceridge ropes is sufficient to allow this portion of the net to take up a curve of free suspension between the said ropes substantially as described.

3. An Otter trawl as claimed in Claims 1 and 2, in which the selvedge portion of the net lying between the two ropes is continued in the form of a tapering gusset into the cod end substantially as described.

4. An Otter trawl as claimed in Claim 1, in which the upper and lower laceridge ropes are connected respectively to the head line tow shackle of the Otter board and to the foot rope tow shackle substantially as described.

5. An Otter trawl or the like net constructed and arranged for operation substantially as described with reference to the accompanying drawings.

Dated this 10th day of November, 1924.

W. P. THOMPSON & Co.,  
12, Church Street, Liverpool,  
Chartered & Registered Patent Agents.

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1 SHEET

[This Drawing is a full-size reproduction of the Original.]

